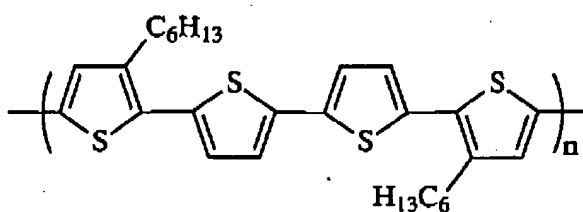
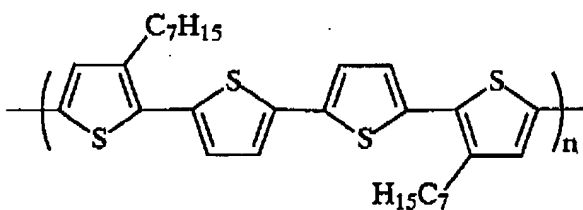


Application No. 10/042,357

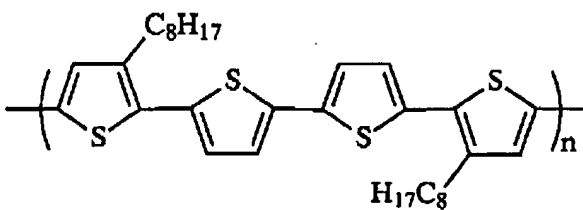
3. (Amended) Polythiophenes in accordance with claim 2 and of the formulas



(II-a)

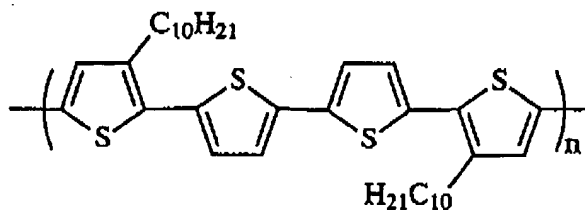


(II-b)

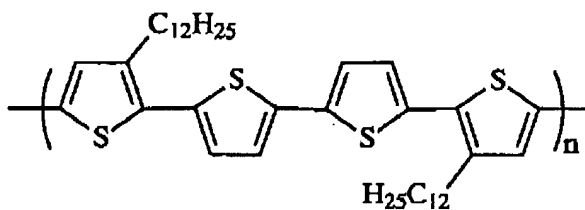


(II-c)

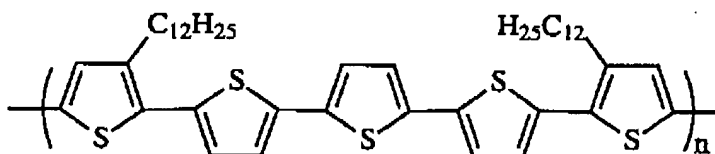
Application No. 10/042,357



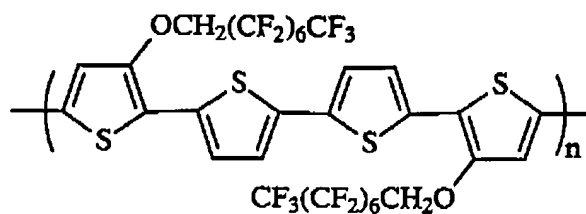
(II-d)



(II-e)

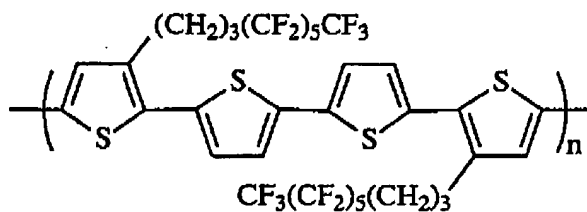


(II-g)

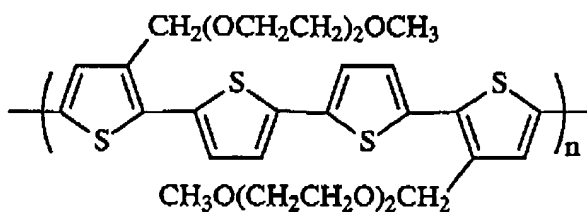


(II-h)

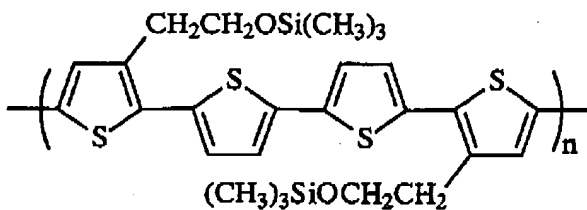
Application No. 10/042,357



(II-i)

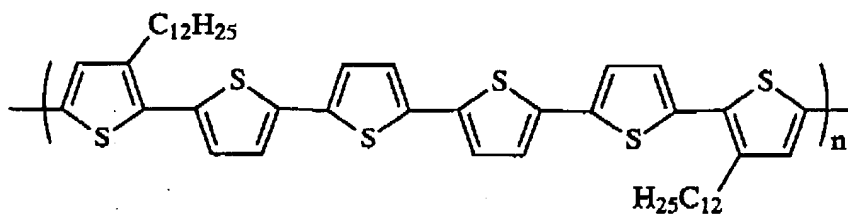


(II-j)

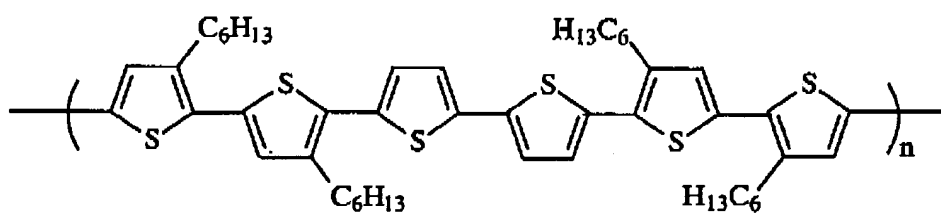


(II-k)

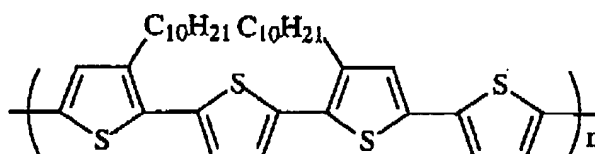
Application No. 10/042,357



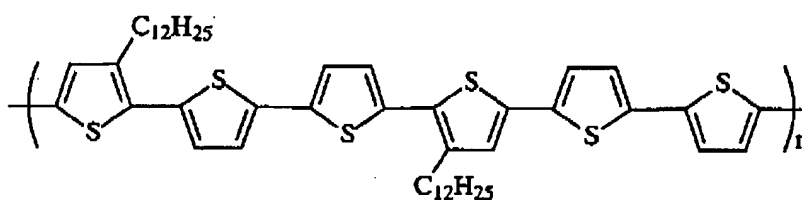
(II-l)



(II-m)



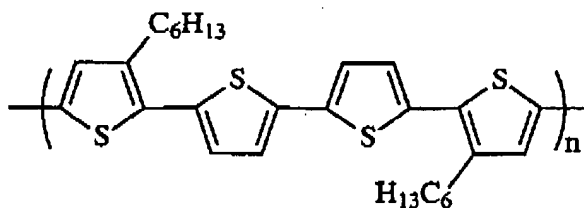
(II-n)



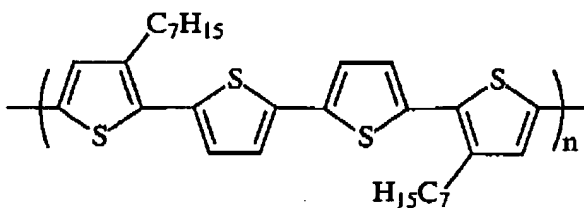
(II-o)

Application No. 10/042,357

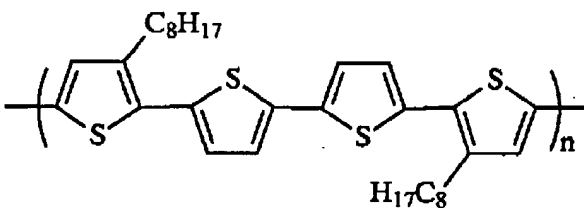
4. (Amended) Polythiophenes in accordance with **claim 2**  
and of the formulas



(II-a)

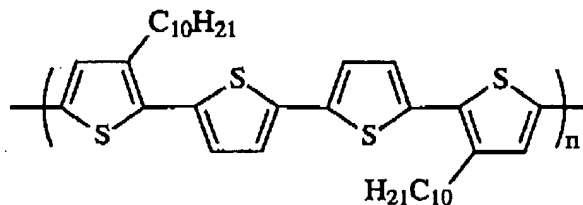


(II-b)

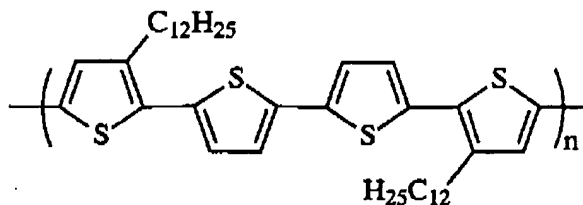


(II-c)

Application No. 10/042,357



(II-d)



(II-e)

5. (Amended) Polythiophenes in accordance with **claim 2** wherein m is 1.

6. (Amended) Polythiophenes in accordance with **claim 2** wherein R is alkoxyalkyl, siloxy substituted alkyl, a perhaloalkyl, or a polyether.

7. (Amended) Polythiophenes in accordance with **claim 2** wherein A is an arylene.

11. (Amended) Polythiophenes in accordance with **claim 2** wherein m is 1 or 2.

Application No. 10/042,357

12. (Amended) Polythiophenes in accordance with **claim 2** wherein x, y, and z represent the number of segments of from 1 to about 5 for x and y, and z is zero (0) or 1.

13. (Amended) Polythiophenes in accordance with **claim 2** wherein n is from about 5 to about 5,000; the number average molecular weight ( $M_n$ ) of the polythiophene is from about 2,000 to about 100,000; the weight average molecular weight ( $M_w$ ) is from about 4,000 to over 500,000, both  $M_w$  and  $M_n$  being measured by gel permeation chromatography using polystyrene standards.

14. (Amended) Polythiophenes in accordance with **claim 2** wherein R is alkyl containing from 1 to about 20 carbon atoms; wherein n is from about 10 to about 1,000; the  $M_n$  is from about 4,000 to about 50,000; and the  $M_w$  is from about 5,000 to about 100,000.

15. (Amended) Polythiophenes in accordance with **claim 2** wherein the alkyl side chain R contains from about 6 to about 12 carbon atoms.

16. (Amended) Polythiophenes in accordance with **claim 2** wherein the alkyl side chain R is butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, undecyl, or dodecyl.

17. (Amended) Polythiophenes in accordance with **claim 2** wherein the side chain R is a perfluoroalkyl of about 2 to about 15 carbon atoms.

Application No. 10/042,357

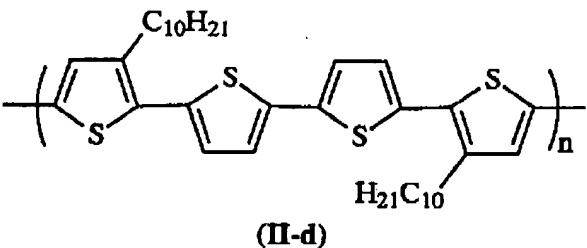
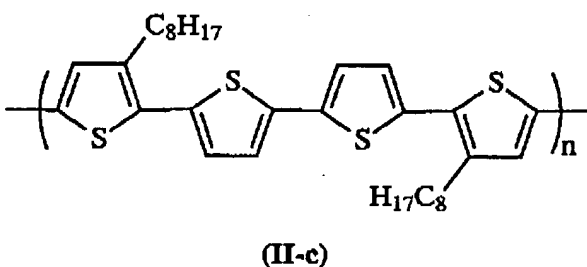
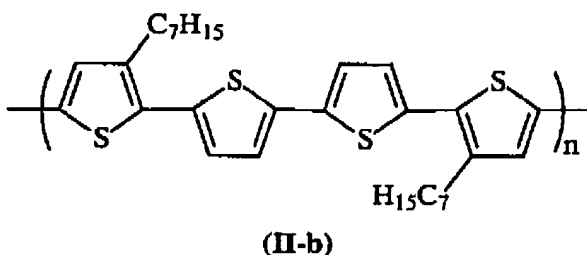
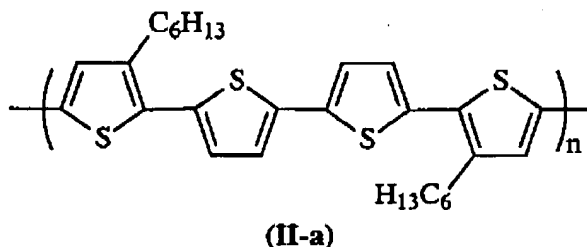
18. (Amended) Polythiophenes in accordance with **claim 2** wherein the side chain R is siloxyalkyl of trimethylsiloxyalkyl or triethylsiloxyalkyl, and wherein alkyl optionally contains from about 4 to about 10 carbons, and which alkyl is butyl, pentyl, hexyl, heptyl, or octyl.

19. (Amended) Polythiophenes in accordance with **claim 2** wherein the divalent linkage A is an arylene with from about 6 to about 40 carbon atoms.

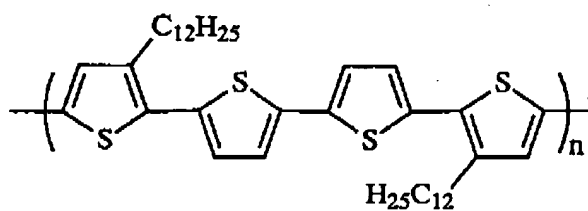
21. (Amended) Polythiophenes in accordance with **claim 2** and wherein n is from about 100 to about 1,000.

Application No. 10/042,357

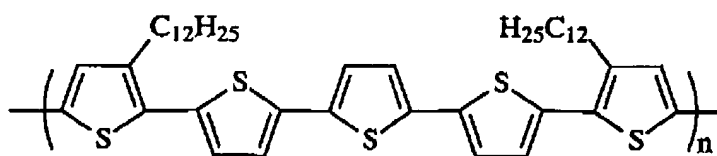
27. (Amended) Polythiophenes in accordance with claim 2 wherein said polythiophene is selected from the group consisting of polythiophenes (II-a) through (II-e) and (II-g), and wherein n is from about 100 to about 4,000



Application No. 10/042,357



(II-e)



(II-g)